

In yet another embodiment, the invention includes a plurality of readers and a plurality of user stations, together with a control means for selectively connecting at least one of the readers to at least one of the user stations so that information retrieved by the selected reader from a storage unit may be presented at the user station. The user station may be equipped with inputs for requesting selections, and the control means may store a count of the number of requests for each selection. The system may include a menu display unit for displaying information about the selections available to a user, and the available selections may be formatted according to the number of times each selection has been played. In addition, the menu display unit may include an input so that a user may select a category of selections or a particular artist or subject, and the menu display unit will then display only the selections from that category or by that artist. The information for the menu display may be obtained and updated from menu information stored on the storage units. In addition, the control means may store a queue of selection requests, with each request being eliminated from the queue when it has been played. Similarly, the control means may store information about the length of time to user has used the system or about the activity at a particular user station.

An interactive embodiment of the invention includes at least one reader, at least one user station, control means for presenting information from the reader to a user, an input for the user, and a memory for storing the user inputs. The control means selects the information to be presented in response to the user inputs, and also processes and stores the user inputs in the memory.

One method of displaying stored information according to the invention includes the steps of selecting a user station from a plurality of user stations; selecting a reader from a plurality of readers, the selected reader having access to the desired information; connecting the selected reader to the selected user station; and displaying the desired information at the selected user station. In addition, the method may include receiving selection requests from users, storing the requests in a queue, and loading each selection into a reader when it reaches the head of the queue. The method may also include retrieving menu information from each of the storage units, processing the menu information to provide a formatted menu and displaying the formatted menu on a menu display unit. The menu information may be ordered according to the number of times each selection has been played or other criteria. The method may also include receiving a user input indicating the type of menu information to be displayed.

In accordance with the invention, an audio/video replay or jukebox system and a method are provided for selectively replaying audio/video information for users.

Other objects, features and advantages of the invention will be apparent from the following description, together with the accompanying drawings and the appended claims.

#### BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view showing a central unit, a user unit and a service unit of an information retrieval system according to the present invention.

FIG. 2 is a side view of the profiles of the storage rack and readers of one embodiment of the system of FIG. 1, showing schematically the positions of the carriage of the invention.

FIG. 3 is a side view showing an example of the structure and operation of the carrying means of the embodiment of FIG. 2.

FIG. 3A is a side view in partial section of an embodiment for loading a disk into a drawer.

FIG. 3B is a cross-sectional view taken along the line 3B—3B in FIG. 3A showing the center hole supporting device in an upper position.

FIG. 3C is another cross-sectional view taken along the line 3B—3B in FIG. 3A showing the center hole supporting device in a partially lowered position.

FIG. 3D is a side view of an embodiment for loading a disk onto a turntable.

FIG. 3E is a side view of an embodiment for loading a disk into one of two positions for loading one player.

FIG. 3F is a cross-sectional view taken along the line 3F—3F in FIG. 3E showing the two loading positions.

FIG. 3G is another cross-sectional view taken along the line 3G—3G in FIG. 3E showing the player.

FIG. 4 is a top plan view showing the carrying means and the readers of FIG. 3.

FIG. 5 is a front view showing the storage rack and the readers of FIG. 3.

FIG. 5A is a top view in partial cross-section of a circular storage rack embodiment of the invention.

FIG. 6 is a partial cross-sectional view of the arm shown in FIG. 3.

FIG. 7 is a cross-sectional view taken along the line 7—7 in FIG. 6.

FIG. 8 is a cross-sectional view taken along the line 8—8 in FIG. 6.

FIG. 9 is a partial cross-sectional view of the end of the arm shown in FIG. 6.

FIG. 10 is a cross-sectional view taken along the line 10—10 in FIG. 9.

FIG. 11 is a partial cross-sectional view taken from the same perspective as FIG. 6.

FIG. 12 is a side view of a part of the arm shown in FIG. 6.

FIG. 13 is a schematic block diagram of one embodiment of the invention which is used as a video jukebox system.

FIG. 14 is a schematic block diagram of a remote terminal for use in the system of FIG. 13.

FIG. 15 is a schematic block diagram of a menu terminal for use in the system of FIG. 13.

FIG. 16 is a schematic block diagram of a central controller for use in the system of FIG. 13.

FIG. 17 is a schematic block diagram of an alternate embodiment of the invention which may be used as an interactive information system.

FIG. 18 is a flow chart of one method of operation of the embodiment of FIG. 17.

FIG. 19 is a schematic block diagram of an alternative embodiment of the invention in which both a central processor and a menu terminal processor are provided.

FIG. 20 is a schematic front view of the front panel of a display unit for use in the invention.

FIGS. 20A—20C illustrate three menu display formats on the display unit of FIG. 20 according to the invention.

FIG. 21 is a flow chart of a method of providing a menu display and user selection according to the invention.